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EXAMINER

PHAM, LEDA T

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 08/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,885

Applicant(s)

ANGERPOINTNER, LUDWIG

Examiner

Leda T. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4 - 5, 10, 12 - 13 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4 and claim 12, the term “said conductors” is lack of antecedent basis. It is understood as “connector.” The term “said connecting points” in claims 10, 12 is also lack of antecedent basis. In claim 5, 13, and 17 “a desired position” is indefinite because it is unclear which position is desired.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 9 – 14, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsu (U.S. Patent No. 6,380,648 B1).

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Hsu teaches a device for transferring electric currents, comprising a slip ring unit (figure 2) having a stator (21) with connecting wires (512) and a rotor (61), and a printed circuit board (415) fastened to said stator and comprising connectors (418) that are in electrical contact with said connecting wires of said stator, wherein said printed circuit board is used as a torque support.

Referring to claim 10, the device for transferring electric currents in Hsu discloses several ones of said connecting wires (512) are conducted out of said stator in accordance with a geometrically determined pattern (figure 4B, 5A), and said connecting points (417) with said connecting wires on said printed circuit board are arranged in a pattern that is in accordance with said geometrically determined pattern.

Referring to claim 11, Hsu discloses an outer portion of said slip ring unit is used as said stator and an inner portion of said slip ring unit is used as said rotor (figure 2).

Referring to claim 12, Hsu discloses starting at said connecting points (417), one or several of said connector (418) over at least a partial area of said printed circuit board are directed radially away from an axis of rotation of said slip ring unit (figure 4B).

Referring to claim 13, Hsu discloses the geometrically determined pattern of said connecting wires (512) is designed in such a way that said printed circuit board (415) can only be attached in a predetermined position.

Referring to claim 14, Hsu discloses the device further comprising a remote-controlled object (51) that transmits and/or receives electrical currents via said slip ring unit.

Referring to claim 16, Hsu discloses a device for transferring electric currents, comprising a slip ring unit (figure 2) having a stator (21) with connecting wires (512) and a rotor

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(61), and a printed circuit board (415) fastened to said stator, said printed circuit board having connectors (418) that are in electrical contact with said connecting wires (512) of said stator; and connecting points (417), wherein said printed circuit board is used as a torque support; wherein an outer portion of said slip ring unit is used as said stator and an inner portion of said slip ring unit is used as said rotor and several ones of said connecting wires (512) are conducted out of said stator in accordance with a geometrically determined pattern and said connecting points (417) with said connecting wires (512) on said printed circuit board (415) are arranged in a pattern that is in accordance with said geometrically determined pattern.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu in view of Sudo et al. (U.S. Patent No. 4,594,524).

Hsu teaches in figure 2 a device for transferring electric currents, comprising a slip ring unit comprising a rotor (61) with connecting wires (512) and a stator (21), and a printed circuit board (415), wherein said printed circuit board comprises connectors (418) in electrical contact with said connecting wires (512), wherein a torque required for rotary movement between said rotor and said stator is introduced via said printed circuit board. However, Hsu does not teach the printed circuit board fastened on the rotor. Sudo teaches the printed circuit board fastened on the rotor (figures 1 – 3) for rotating with the rotor. Thus, it would have been obvious to one

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skilled in the art at the time the invention was made to change the position of Hsu's printed circuit board from stator to rotor as taught by Sudo. Doing so would make the printed circuit board rotating with the rotor.

Referring to claim 2, Hsu discloses the connecting wires (512) transmit current and are arranged in a geometrically determined pattern out of said rotor, and said printed circuit board (415) comprises connecting points (417) that are connected with said connecting wires (512) and that are arranged in a pattern that is in accordance with said geometrically determined pattern.

Referring to claim 3, Sudo teaches an outer portion of said slip ring unit is used as said stator and an inner portion of said slip ring unit is used as said rotor.

Referring to claim 4, Hsu teaches starting at said connecting points (417), one or several of connectors (418) over at least a partial area of said printed circuit board are directed radially away from an axis of rotation of said slip ring unit.

Referring to claim 5, Hsu teaches said geometrically determined pattern of said connecting wires (512) is designed in such away that said printed circuit board (415) can only be attached in a predetermined position.

Referring to claim 6, Hsu teaches the device further comprising a remote-controlled object (51) that transmits and/or receives electrical currents via said slip ring unit.

Referring to claim 8, Hsu teaches a device for transferring electric currents, comprising a slip ring unit (figure 2) having a rotor (61) with connecting wires (512) and a stator (21); and a printed circuit board (415) said printed circuit board comprising connectors (418) in electrical contact with said connecting wires (512) of said rotor (61); and connecting points (417); wherein a torque required for rotary movement between said rotor and said stator is introduced via said

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printed circuit board, wherein an outer portion of said slip ring unit is used as said stator and an inner portion of said slip ring unit is used as said rotor and several ones of said connecting wires are conducted out of said rotor for transmitting current in accordance with a geometrically determined pattern, and said connecting points with said connecting wires are arranged in a pattern that is in accordance with said geometrically determined pattern. Sudo teaches the printed circuit board fastened to rotor.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu as applied to claims 1 - 14 above, and further in view of Taguchi et al. (U. S. Patent No. 3,913,114).

Hsu teaches the device having the claimed invention except for the remote-controlled object comprises a camera. Taguchi discloses a remote-controlled having a camera for controlling a certain determined rotating position of motor. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the remote-controlled as taught by Taguchi. Doing so would control a certain determined rotating position of motor.

8. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hsu and Sudo as applied to claims 1 - 6 above, and further in view of Taguchi.

Referring to claim 7, the combination of Hsu and Sudo refs teaches the device having the claimed invention except for the remote-controlled object comprises a camera. Taguchi discloses a remote-controlled having a camera for controlling a certain determined rotating position of motor. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the controlled-controlled as taught by Taguchi. Doing so would control a certain determined rotating position of motor.

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Referring to claim 17, the combination of Hsu and Sudo teaches a device for transferring electric currents to, or from a remote controlled camera, comprising a slip ring unit (figure 2) comprising a rotor (61) with connecting wires (512) and a stator (21); and a printed circuit board (415), said printed circuit board comprising connectors (418); wherein a torque required for rotary movement between said rotor and said stator is introduced via said printed circuit board, wherein an outer portion of said slip ring unit is used as said stator and an inner portion of said slip ring unit is used as said rotor, and several ones of said connecting wires are conducted out of said rotor in accordance with a geometrically determined pattern, and said connecting points with said connecting wires on said printed circuit board are arranged in a pattern that is in accordance with said geometrically determined pattern, wherein said geometrically determined pattern of said connecting wires is designed in such a way that said printed circuit board can only be attached in a predetermined position. However, the combination of Hsu and Sudo do not disclose the connectors contacting with a remote-controlled camera. Taguchi discloses a remote-controlled having a camera for controlling a certain determined rotating position of motor. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the controlled-controlled as taught by Taguchi. Doing so would control a certain determined rotating position of motor.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (703) 305-4864. The examiner can normally be reached on M-F (7:30-5:00) first Friday Off.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9176 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

Leda T. Pham
Examiner
Art Unit 2834

LTP
August 26, 2002



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